

DOK Grade Level Examples

Level 1: Recall and Reproduction

4th Grade Example

Bill lives on the side of the street with even-numbered addresses. Which addresses below would be found on Bill's side of the street

- A. 1020, 1022, 1024
- B. 2021, 2023, 2025
- C. 3168, 3169, 3170
- D. 4167, 4168, 4170

8th Grade Example

- From any vertex of a 4-sided polygon, 1 diagonal can be drawn.
- From any vertex of a 5-sided polygon, 2 diagonals can be drawn.
- From any vertex of a 6-sided polygon, 3 diagonals can be drawn.
- From any vertex of a 7-sided polygon, 4 diagonals can be drawn.
- How many diagonals can be drawn from any vertex of a 20-sided polygon?

11th Grade Example

The density of kerosene is approximately 0.82 g/mL.

Choose a rate or quantity from the box to each blank to calculate the mass, in kilograms, of 20 liters of kerosene.

_____ × _____ × _____ × _____

20 L	820 kg	820 mL	2,000 mL
$\frac{0.82 \text{ g}}{1 \text{ mL}}$	$\frac{2000 \text{ mL}}{20 \text{ L}}$	$\frac{1 \text{ L}}{1,000 \text{ mL}}$	$\frac{1,000 \text{ g}}{1 \text{ kg}}$
$\frac{1 \text{ kg}}{1,000 \text{ g}}$	$\frac{1 \text{ kg}}{1,000 \text{ L}}$	$\frac{1,000 \text{ mL}}{1 \text{ L}}$	$\frac{1,000 \text{ L}}{1 \text{ kg}}$

DOK Grade Level Examples

Level 2: Skills/Concepts

4th Grade Example

The class went on a field trip. The students left school at 9:00 am, They returned to school at 1:30 p.m. How long were they gone?

- A. 8 hr 30 min
- B. 8 hr
- C. 4 hr 30 min
- D. 4 hr

8th Grade Example

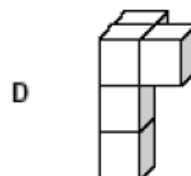
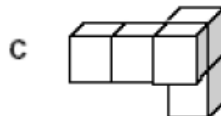
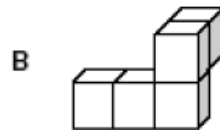
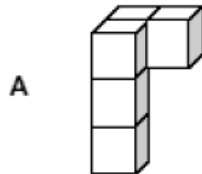
A triangle has 0 diagonals, a quadrilateral has 2 diagonals, a pentagon has 5 diagonals, and a hexagon has 9 diagonals. If the pattern continues, how may diagonals will an octagon have?

Sides	3	4	5	6
Diagonals	0	2	5	9

- A. 11
- B. 14
- C. 18
- A. 20

11th Grade Example

Which pentacube is not congruent to the others?



DOK Grade Level Examples

Level 3: Strategic Thinking

4th Grade Example

















Think carefully about the following question. Write a complete answer. You may use drawings, words, and numbers to explain your answer. Be sure to show all of your work.

- Laura wanted to enter the number 8375 into her calculator. By mistake, she entered the number 8275. Without clearing the calculator, how could she correct her mistake?
- Without clearing the calculator, how could she correct her mistake another way?

8th Grade Example

Look at the drawing. The numbers alongside each column and row are the total of the values of the symbols within each column and row. What should replace the question mark?

- B. 23
- C. 25
- D. 28
- E. 30

				28
				30
				20
				16
?	19	20	30	

11th Grade Example

Which of the following is NOT true for any value of x ?

- A. $x < x^2 < x^3$
- B. $x^3 < x < x^2$
- C. $x^2 < x < x^3$
- D. $x < x^3 < x^2$
- E. $x^3 < x^2 < x$

DOK Grade Level Examples

Level 4: Extended Thinking

5th Grade Example

School Festival – see separate handout.

8th Grade Example

Water Tank or Water Tower – see separate handout

11th Grade Example

Players A and B are playing a game. On a table between them is a stack of n pennies. First, Player A removes either one or two pennies from the stack. Then Player B removes either one or two pennies from the stack. They alternate in this way until no pennies remain. The loser is the player who removes the last penny from the stack.

- If they start the game with 5 pennies in the stack, how many pennies should Player A take from the stack on her first turn? Why?
- If the game starts with 7 pennies in the stack, would you rather be Player A or B? Why?
- For what values of n , if any, is it best to be player A?
- For what values of n , if any, is it best to be player B?
- Explain and justify your answers.